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PPCPs (Pharmaceuticals and Personal Care Products): **Acetaminophen (Paracetamol)**

Acetaminophen (or Paracetamol outside the U.S) is used to relieve mild to moderate pain from headaches, muscle aches, menstrual periods, colds and sore throats, toothaches, backaches, and reduces fever (Katzung et al. 2012).

From the articles collected from the ECOTOX database in April 2016, there are 49 articles focused on acetaminophen. The most sensitive taxa from these articles are freshwater plants and mollusks (clams/mussels). The most common effects of acetaminophen involve organ damage (such as liver), increased mortality, and genetic damage that can cause visual defects.

Reported effects of acetaminophen from toxicity literature in the ECOTOX database (as of April 2016)

Aquatic Life	Reported Most Common effect(s)	Reported Common study endpoints	Reported Toxicity Value (LOEC, NOEC, EC50, LC50)
Fish	Toxicity, Organ defects, Liver damage	Hepatoxicity, development, Physiological	24 LC50: 10.12 mM 48 LC50: 9.92 mM 72 LC50: 7.87 mM 144 LC50: 3.71 mM 72 EC50: 6.23 mM 144 EC50: 3.12 mM (Selderslaghs 2012)
African Clawed Frog/Leopard Frog	Mortality, Decreased Activity	Wastewater Contaminants, Development	96-h LC50: 49.6 mg/L 96-h EC50: 20.1 mg/L (Fort 1992)
Clams / Mussels	Genetic & Liver Damage / Stress	Biomarker Response	LOEC: 23 µg/L (hepatic organ) LOEC: 403 µg/L (gill) (Sole 2010)
Freshwater plants	Physiological & biochemical changes	Growth	LOEC: 0.608 (umol) EC50: 1.15 umol/L (Brian 2004)
Water Flea	Inhibited Reproduction, reduced acute effects in high pH	Harmful effects, Acute toxicity, Environmental effects	EC50: 48 h (mg/L): pH 7.4: 12.7 (10.3–15.8) pH 8.3: 8.3 (4.3–12.3) pH 9.2: 32.5 (27.1–38.0) (Kim 2010)

Katzung B.G., S.B. Masters, A. J. Trevor. (2012) Basic and clinical pharmacology. McGraw Hill. New York, NY, pp. 39.